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Chloé Le Coq, SITE
Elena Paltseva, SITE
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Covid-19: News for Europe's Energy Security

While there has been a lot of attention on the effect of Covid-19-related developments in the oil market, the effect on the natural gas market has almost evaded media attention. For the EU, however, the gas market and especially the impact of the pandemic on the gas relationship with its largest gas supplier, Russia, is of high relevance. This brief discusses potential implications of Covid-19 on this relationship both under the pandemic and during the expected slow economic recovery. We argue that, while in the short run the security of Russian gas supply is likely to improve, this is unlikely to be the case in the aftermath of the pandemic. To ensure gas supply security in post-pandemic markets, the EU may need to finally implement the long-awaited "speaking with one-voice" energy policy.

Introduction

The ongoing coronavirus pandemic will not only affect human lives, but also bring new economic and political challenges. The energy sector, and in particular the dramatic decrease of oil prices, has been in the news since the beginning of the Covid-19 crisis. But discussions have so far rarely touched the natural gas market, despite the pandemic taking its toll also on this market. As for oil, the demand and price have been negatively affected by the economic slowdown. While not as drastic as for oil, the price of natural gas in the EU has declined by approximately 40% since the beginning of 2020 (World Bank, 2020). However, the impact of the pandemic is likely to be quite different in oil and gas markets. There are multiple reasons for that; for example, oil and oil products are predominantly consumed by the transport sector while natural gas is mostly used in the power sector, the industry and households, and these sectors were differently affected by the Covid-19 pandemic.

Understanding the impact of the pandemic on the gas market is especially interesting from the European point of view, given that natural gas accounts for 25% of total energy consumption and two thirds of this gas is imported. The imports are also very concentrated, with the main supplier Russia providing around 40% of the gas, compared to 25% of the crude oil. This dependency as well as a long history of tensions with third parties (Ukraine and Belarus) on the Russian gas transit routes has made the EU's concerns about the security of Russian gas supply much more pronounced than for oil (see Le Coq and Paltseva, 2012). The combination of these factors – i.e. the importance of natural gas for the EU and the long-standing concern about gas supply security warrant an analysis of the short and mid-term effect of the Covid-19 pandemic on the gas market, and, specifically, on the EU-Russia gas relationship. This brief discusses how the pandemic-driven decline in gas demand, and the potential shift in the balance of power between the parties may affect both the dependency on, and the transit of, Russian gas.

EU Dependency on Russian Gas Under the Covid-19 Pandemic

As is well known, Covid-19 and the associated lockdowns imposed by many EU Member States, have caused a slowdown in most economies and a decline in energy demand. However, for natural gas the effect is likely to be significantly smaller than for oil. While we do not yet have statistics for the EU's gas demand in recent months, the Norwegian energy consultancy Rystad Energy has predicted the decline of gas demand to be around 4% for March and April 2020 (Rystad Energy, March 19, 2020). This forecast was given quite early in the course of the pandemic, and is very likely an underestimation; still, it is very different from the one for oil, with the demand drop estimated to be a whopping 34% in April (Rystad Energy, April 23, 2020).

One reason why we do not observe a sizable decrease in gas demand is that the natural gas is used in electricity generation, especially as a base-load fuel to compensate for the intermittency of green energy sources, such as sun and wind. With the reduced electricity demand, renewable power generation has become relatively more important in the electricity supply in many countries. Since mid-March 2020, the share of renewable power

generation across the EU is 46%, nine percent higher than during the same period last year (Energy Transition Lab, 2020). Interestingly, in France, Germany, Belgium, the Netherlands, the Czech Republic, Poland and Hungary, the absolute volume of electricity generation by renewable sources even increased relative to the same period in 2019, despite declining energy demand. One potential channel, anecdotally recorded for Germany (Bloomberg, 2020) could be higher solar generation due to cleaner skies resulting from the decline in emissions because of lower fossil energy consumption. A higher volume of renewable generation often requires more back-up power to maintain grid stability. While natural gas is not the only back-up source, this need might still limit the decline in gas demand (or even increase it like e.g. in the Czech Republic). Of course, cheaper gas prices may also play a role: for example, Slovakia and Romania experienced an increase in gas-based generation, but a drop in renewable generation since mid-March 2020 relative to the same period in 2019. Finally, another reason for the moderate gas demand decline is its residential use – which is likely to be sustained due to the lockdown regime introduced by many countries.

When it comes to Russian gas imports, the official statistics since mid-March – roughly the beginning of lockdown policies across the EU - are not available yet. However, we can with some reservation look at the evolution of the volume of gas sales to EU disclosed by Gazprom (2020). There was a very sizable decrease in Russian gas imports by the EU – of more than 21% - as compared to the same period last year but it started before the lockdown: January 2020 recorded a drop of 34% and February of 20%). This suggests that the current decrease in Russian gas imports is only marginally related to the pandemic, and more related to the overall gas market situation (such as relatively full gas storage in the EU in 2020, a warm winter, an increase in LNG imports, etc.).

It is, however, likely that the negative effect of the pandemic on Russian gas imports by the EU will be noticeably higher than it currently appears in the Gazprom data, thereby further decreasing the EU's dependency on Russian gas. Moreover, since demand and prices decrease, substituting for Russian gas, were there a supply interruption, should be relatively easy and cheap with the current excess capacity of the natural gas market and the substantial storage in the EU.

Another reason for the improvement in the security of Russian gas supply to the EU is the observation that Russia's dependency on oil and gas exports in combination with pandemic-associated factors may lead to a substantial economic downturn in Russia (Becker, 2020). In these dire circumstances, Russia is unlikely to further risk its gas export revenues by pursuing geopolitical goals through the means of gas supply and gas transit. For all these reasons, one may expect the security of Russian gas supply to the EU to improve during the pandemic.

However, the EU dependency on Russian gas may still be a concern due to medium-run effects of Covid-19. First of all, while the gas prices have been in decline for roughly a year now, the recent decrease in natural gas prices has accelerated the negative impact on the unconventional natural gas industry. For example, the US natural gas rig count has declined by 20% since mid-March 2020, which accounts for more than a third of the 54% year-to-year decline (Ycharts.com, 2020). Similarly, nearly

42% of Australian gas resources could be uneconomic under the current gas prices (Rystad Energy, April 3, 2020). While gas prices are unlikely to stay low forever, the industry will need time to recover even if/when the natural gas demand rises again. Moreover, the East-Asian markets are likely to be served first, as they are expected to recover from the pandemic shock before Europe. This dynamic, coupled with historically higher LNG prices in Asia may delay the LNG flows to Europe. A shortage of LNG in Europe, in turn, is likely to hinder any diversification strategy from Russian gas, weakening the EU's bargaining power. The new Russia-China gas pipeline, "Power of Siberia", operational since the end of 2019, will also be used to satisfy the post-Covid-19 Chinese gas demand which is likely to recover before demand picks up in the EU. Its use will then allow Russia to be less reliant on exporting gas to the EU, further contributing to the EU's gas security concerns.

Transit of Russian Gas to the EU: Covid-19 Effect

The EU's energy security also depends on the reliability of Russian gas transit to the EU. There are currently 5 transit routes connecting Russia to the EU (plus the routes that are serving the Baltic states and Finland without further transit), see Figure 1. Three onshore routes connect Russia to the EU via Ukraine and Belarus. There has been a history of gas transit disputes associated with these routes, at times threatening the Russian gas supply to the EU. Two newer offshore pipelines, Nord Stream 1 (in operation since 2011) and TurkStream (in operation since 2020) connect Russia directly to Germany, and to the South-East of Europe via Turkey. Further, one more offshore route to Germany, Nord Stream 2, is currently underway, with the operations announced to start in the first quarter of 2021. All three offshore projects are expected to not suffer from geopolitical transit issues.

In relation to the Covid-19 pandemic, there are likely to be two major effects on Russian gas transit. First, the inauguration of Nord Stream 2 is likely to be further delayed. Nord Stream 2 is 50% financed by Gazprom, and this financing scheme may be difficult to sustain after the fall in oil and gas prices and a significant decrease of Gazprom's export revenues. Indeed, while the statistics for March and April 2020 are not yet available, the Russian customs statistics suggests that the USD value of gas exports from Russia in January-February 2020 has decreased by 45% relative to the same period last year. Because Nord Stream 2 could facilitate gas delivery to the EU in case of a transit conflicts, its expected delay may negatively impact the EU's gas security.

Additionally, the Covid-19 related demand drop may impact the utilization of Russia-EU gas routes, driven by the current agreements between Russia and the transit countries. Russia and Ukraine have just signed a transit agreement for the next 5 years. This agreement was widely perceived as a diplomatic success of the EU (that facilitated the deal, see e.g. FT, 2019), given the historically difficult geopolitical relation between Ukraine and Russia. One of the new features of this agreement is of particular interest within the Covid-19 context. Unlike for previous deals, Russia agreed to prepay a fixed volume of gas transit, 178.1 mcm/day for 2020, and 110 mcm/day units for 2021-24 (Pirani et al., 2020). So, underutilization of this route is costly for Russia.

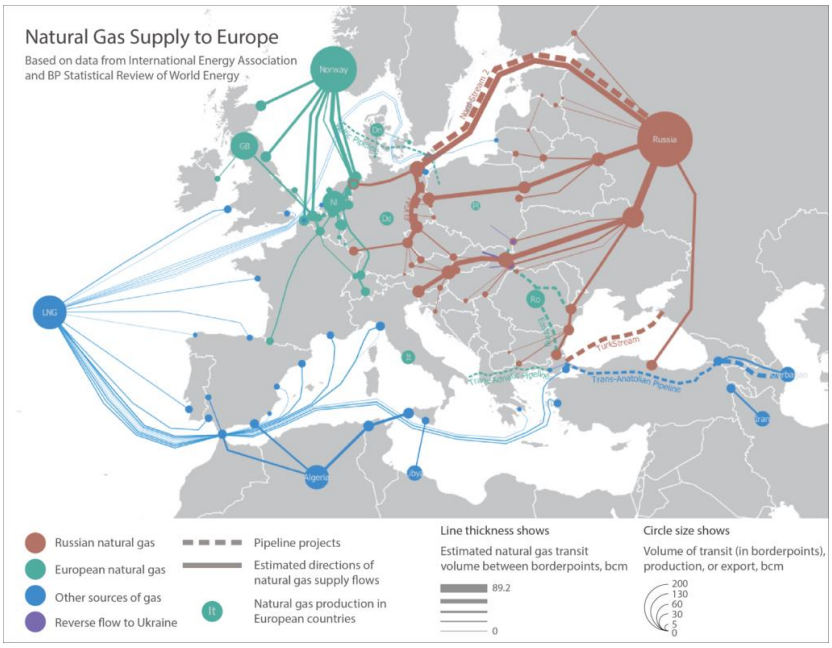

Figure 1. Gas supply Routes to the EU.

Source: *Ukrainian Liaison Office in Brussels*

With decreased demand due to Covid-19, warmer weather in the coming months and almost full gas storages in the EU, this contractual feature may affect how Russia allocates its gas exports across the routes. At least, in the short term, it may undermine Russian gas transit via the Belarus-Poland route. The concern about the utilization of this route in relation to the new Russia-Ukraine transit agreement has already been raised by Pirani et al. (2020). The Covid-19-associated decrease in gas demand is likely to make this concern much more real. Russia may use the Belarus-Poland pipeline sporadically, e.g. to adjust for the seasonal spikes in demand, without long-term capacity booking. Recent gas tensions between Russia and Poland (e.g. Poland winning in the arbitration court against Gazprom (RFE/RL, 2020), and Poland repeatedly expressing opinions and exercising legislative effort restricting the usage of Nord Stream 1 and construction of Nord Stream 2, see Uawire.org, 2020 and Bloomberg, 2019) may further exacerbate the issue.

In the medium term however, when the EU gas demand has recovered but Nord Stream 2 is not yet in place, the Belarus-Poland route is likely to prove useful for Russia, at least starting from 2021 (when prepaid volumes of Russian gas transit via Ukraine will decline according to their agreement).

The transit contract between Russia and Poland is to be renewed in mid-May 2020, and as of now, it is unclear if, and how it will be written and whether the Belarus-Poland transit route will be used to a substantial degree or only marginally. If transit through the Belarus-Poland route is limited, it will imply poorer route diversification for a major part of European consumers of Russian gas, thereby lowering their security of Russian gas supply. This may also put another strain on the bargaining power allocation within the EU and the EU's intended common energy policy of "speaking with one voice" with external energy suppliers like Russia.

Conclusion

Summing up, the decrease in demand of natural gas, as well as other factors associated with the ongoing Covid-19 pandemic, such as economic recession and turbulence in stock markets, are likely to have noticeable implications for the security of Russian gas supplies to the EU in the short term. On the one hand, even if the current pandemic-associated decrease in demand of gas from Russia seems rather moderate, the ultimate negative effect on Russian gas imports by the EU is likely to be larger. Lower imports from Russia are likely to improve the security of supply, both through lower import dependency of the EU, and through improved market opportunities due to the current market's overcapacity. On the other hand, in the medium run, lower demand also negatively affects the non-conventional gas industry, undermining the diversification opportunities to LNG, and, consequently, natural gas energy security. Further, a fall in the gas demand by the EU coupled with the newly signed transit agreement between Russia and Ukraine may potentially cause underusage of the Belarus-Poland transit route, thereby putting a strain on the diversification of Russian gas import routes to the EU and on the power balance within the EU.

Energy security might be even more of a concern in the post coronavirus period when the economy is slowly recovering, and cheap and guaranteed energy supply is crucial. To ensure this supply, national efforts combined with an EU-wide policy coordination would be required. The long-discussed "speaking with one voice" common energy policy may finally need to materialize in order to facilitate reliable access to natural gas.

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Chloé Le Coq

Stockholm Institute of Transition Economics (SITE)
Chloe.LeCoq@hhs.se
https://www.hhs.se/site

Chloé Le Coq is Professor of Economics at the University of Paris II Panthéon-Assas (CRED) and Research fellow at the Stockholm School of Economics (SITE). Her research investigates topics related to antitrust policy, industrial organization, and experimental economics, with particular focus on the energy markets and their regulation. Her recent work includes empirical studies on financial contracts, social innovation and experimental studies of the electricity auction.

Elena Paltseva

Stockholm Institute of Transition Economics (SITE)
Elena.Paltseva@hhs.se
https://www.hhs.se/site

Elena Paltseva received her PhD in Economics from Stockholm School of Economics in 2006. Prior to joining SITE, Paltseva has worked as an Assistant Professor at the Department of Economics, University of Copenhagen.

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